

**ALTERNARIA LEAF BLIGHT OF BRASSAIA AND RELATED HOSTS**

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Many of the plants belonging to the family Araliaceae are used extensively for interiorscaping and as accent plants in homes and public buildings. The Araliaceae represent a large part of the foliage plant trade in Florida and because of this, foliar diseases affecting these plants are of great concern. One particular foliar blight caused by the fungus *Alternaria panax* Whetzel (1912) (5A. *actinophylla* Miller (1957) and *A. araliae* Green. (1953)] (6), is commonly found on many important members of the Araliaceae, most notably *Brassaia actinophylla* Endl. (3,5). This disease was first reported on *Panax quinquefolius* L. or ginseng.

Besides *Brassaia actinophylla*, other important susceptible hosts represented in DPI files include *Schefflera arboricola* Hayata, *Dizygotheca elegantissima* (Hort. Veitch) R. Vig. & Gault., *Polyscias balfouriana* (Hort. Sander) Bailey, *Polyscias fruticosa* (L.) Harms, *Tupidanthus calyptratus* Hock. F. & T. Thorns., *Fatsia japonica* (Thunb.) Decne. & Planch, and various species of *Aralia* (1).

**SYMPTOMS:** The disease syndrome varies only slightly from host to host but with few exceptions, *A. panax* causes a serious foliar blight. Early symptoms of *Alternaria* leaf blight on *Brassaia actinophylla* are expressed as small brown to dark brown circular leaf spots commonly surrounded by a chlorotic halo (4). Water-soaking of affected tissues usually accompanies the expanding leaf lesions which can eventually spread to encompass entire leaflets (Fig. 1). This disease can cause considerable defoliation (2). Under favorable conditions, sporulation is abundant on both leaf surfaces and is easily seen with the aid of a hand lens.

Early symptoms of this disease are similar on all hosts, however, as the infection spreads on *Fatsia*, the leafspots generally remain circular, may display a concentric ring pattern, and normally don't expand to blight entire leaves. (Fig. 2) When the disease becomes severe, defoliation of infected leaves can occur. On seedlings of susceptible plants, this pathogen can behave as a damping-off organism, blighting both stems and foliage. Disease development is encouraged by warm temperatures (75-81°F) and wet conditions (4). The fungal spores are dispersed by air currents as well as splashing water, and under favorable conditions, the disease can spread quickly. *Alternaria panax* produces long, elliptical, beaked spores (conidia) which develop transverse septa and are light golden brown in color. As the conidia mature, longitudinal septa form, the spores darken and develop a convoluted, lumpy appearance (Fig. 3). This swollen appearance is characteristic of many but not all isolates of *Alternaria panax*. Conidial length can range from 80 to over 200 µm and in some cases *A. panax* will produce chains of spores from single conidiophores (6).

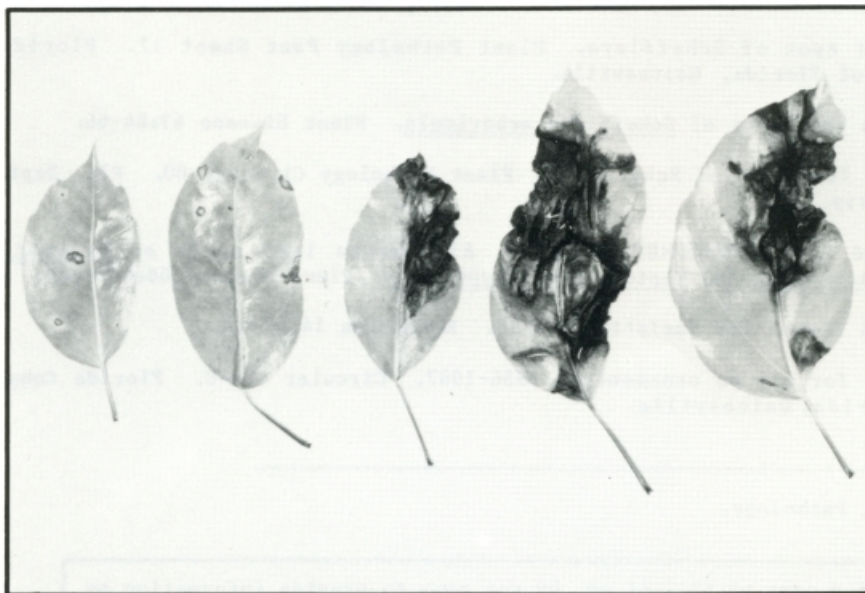


Fig. 1. Early symptoms showing small necrotic lesions and characteristic chlorotic halos (left) followed by progressive blighting of infected foliage (right).

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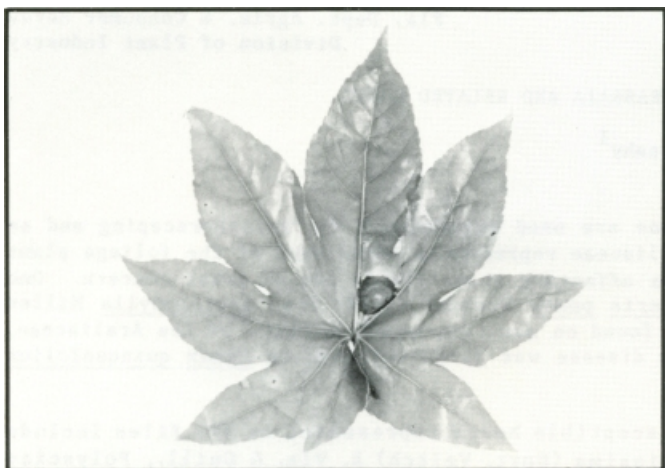


Fig. 2. Early symptoms of *A. panax* on *Fatsia* displaying small leaf spots with chlorotic halos and a more developed nearly circular spot with a slight concentric ring pattern.

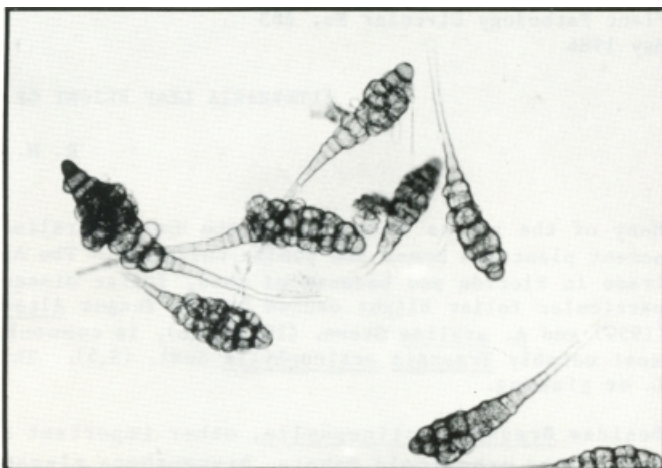


Fig. 3. Spores of *Alternaria panax* develop a convoluted lumpy appearance and become dark golden brown with age. Note the tapered beak also characteristic of *A. panax*. (400x)

**CONTROL:** Chemical control of *Alternaria* leaf blight can be achieved by the application of mancozeb on a 7-14 day spray schedule (7). Although mancozeb compounds are considered safe for use on *Brassaia* and its relatives, caution should be used when applying any fungicide since these plants are notoriously sensitive to many chemicals. Also, since disease severity is enhanced by wet, crowded conditions, improved aeration and reduced overhead watering will decrease inoculum dispersal.

**SURVEY & DETECTION:** The foliage of diseased host plants will exhibit large, irregular, rather wet, dark brown lesions occasionally blighting entire leaves or leaflets. Early signs of this disease include small, circular water-soaked leafspots surrounded by a chlorotic halo. Under moist conditions, sporulation of the fungus can be seen on both sides of affected leaves as a diffuse layer of dark, golden brown fuzz.

#### **LITERATURE CITED:**

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